# Service Hints

## Plasma Television

### &lt;PDP 2009 Model&gt;

TH-P65/58/50V10A

TH-P50/42G15A

TH-P50/46/42G10A

TH-P54/50/46/42S10A

TH-P50/42X10A

TH-P50/42X14A

TH-P65V10A

- Ver 2.0-

## Troubleshooting Guide

This service hints is published for technicians and engineers for repair.
And it gives you the information how to judge the defective board of PDP.
In the future,we will improve the contents for more easy diagnostic and
trouble shooting.

Please file and use this Service Hints together with the main service
manual and other publications related to models.

### ⚠ WARNING

## Panasonic®

# Contents

# 1. 2009 PDP Line up & Feature Comparison

# 1. 2009 PDP Line up & Feature Comparison

| | | V10 Series | G15 Series | G10 Series | S10 Series | X10 Series | X14 Series |
|---|---|---|---|---|---|---|---|
| **Picuture** | Size | 65/58/50 | 50/42 | 50/46/42 | 54/50/46/42 | 50/42 | 50/42 |
| | Panel | Full-HD NeoPDP | Full-HD NeoPDP | Full-HD NeoPDP | Full-HD PDP | HD PDP | HD PDP |
| | AR Filter | Y | Y | Y | Y | Y | Y |
| | Contrast Ratio | 40,000:1 | 40,000:1 | 40,000:1 | 30,000:1 | 30,000:1 | 30,000:1 |
| | Moving Picture Resolution | 1080 lines | 1080 lines | 1080 lines | 1080 lines | 720 lines | 720 lines |
| | 600 Hz Sub-Field Drive | Y | Y | Y | N (550Hz) | Y | Y |
| | 24p Smooth Film | Y | — | — | — | — | — |
| | Digital Cinema Colour | Y | — | — | — | — | — |
| | Shades of Gradation | 6144 | 6144 | 6144 | 5120 | 5120 | 5120 |
| | Deep Colour (10/12-bit) | Y | — | — | — | — | — |
| | x.v. Colour | Y | Y | Y | Y | Y | Y |
| | THX Mode | Y | — | — | — | — | — |
| | 3D Colour Management | Y | Y | Y | Y | Y | Y |
| | Sub Pixel Control | Y | Y | Y | Y | Y | Y |
| | C.A.T.S. | Y | Y | Y | Y | Y | Y |
| **Sound** | Speakers | Full-Range | Full-Range | Full-Range | Full-Range | Full-Range | Full-Range |
| **Networking** | VIERA Image Viewer | Y (AVCHD/MPEG2 /JPEG playback) | Y (AVCHD/MPEG2 /JPEG playback) | Y (AVCHD/MPEG2 /JPEG playback) | Y (AVCHD/MPEG2 /JPEG playback) | Y (AVCHD/MPEG2 /JPEG playback) | Y (JPEG playback) |
| | HDMI Input | 4 | 4 | 3 | 3 | 3 | 2 |
| | PC Input | Y | Y | Y | Y | Y | Y |
| | LAN Port | — | Y | — | — | — | — |
| | VIERA Cast | — | Y | — | — | — | — |
| | VIERA Tools | Y | Y | Y | Y | Y | Y |
| | VIERA Link (HDAVI Control 4) | Y | Y | Y | Y | Y | Y |
| | Game Mode | Y | Y | Y | Y | Y | Y |

# 2. PCB Location & Function

## TH-P65V10A
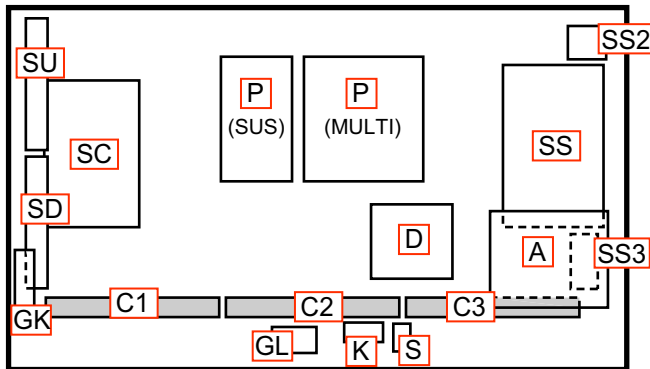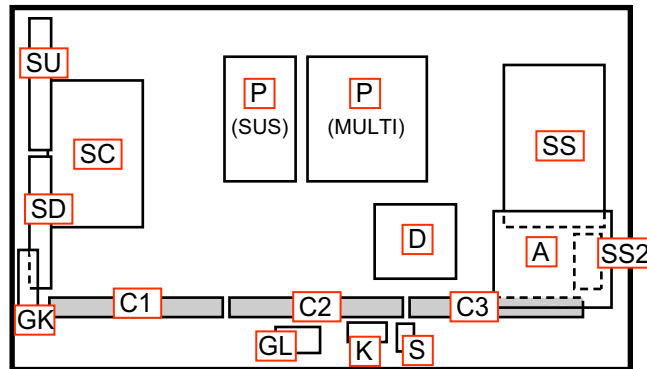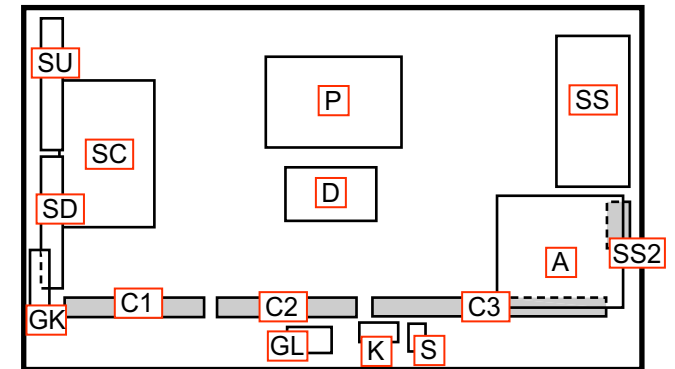


| Board Name | Function | Parts Number |
|---|---|---|
| P | Power Supply（SUS） | ETX2MM774MG |
| | Power Supply（MULTI） | ETX2MM774MA |
| A | DC-DC Converter, Tuner, Speaker out, AV Terminal, AV Switch, PC, Digital Signal Processor, SYSTEM MPU, HDMI Switch, Peaks-AVC, | TXN/A1DRUA |
| D | Format Converter, Plasma AI, Sub-Field Processor | TZTNP02DNUM |
| K | Remote receiver, Power LED, C.A.T.S sensor | TNPA4857AC |
| S | Power Switch | TNPA4858AB |
| GK | Key Switch | TNPA4875AB |
| GL | SD LED | TNPA4693AB |
| C1 | Data Driver (Lower Right) | TNPA4990 |
| C2 | Data Driver (Lower Center) | TNPA4991 |
| C3 | Data Driver (Lower Left) | TNPA4992 |
| SC | Scan Drive | TXNSC1DNUJ |
| SS | Sustain Drive | TXNSS1DNUJ |
| SS2 | Sustain out (Upper) | TNPA4983 |
| SS3 | Sustain out (Lower) | TNPA4984 |
| SU | Scan out (Upper),Not repairable. SU-Board should be exchanged for service. | TNPA4981 |
| SD | Scan out (Lower),Not repairable. SD-Board should be exchanged for service. | TNPA4982 |

## TH-P58V10A



| Board Name | Function | Parts Number |
|---|---|---|
| P | Power Supply（SUS） | ETX2MM774MF |
| | Power Supply（MULTI） | ETX2MM774MA |
| A | DC-DC Converter, Tuner, Speaker out, AV Terminal, AV Switch, PC, Digital Signal Processor, SYSTEM MPU, HDMI Switch, Peaks-AVC | TXN/A1DRUA |
| D | Format Converter, Plasma AI, Sub-Field Processor | TZTNP02DPUM |
| K | Remote receiver, Power LED, C.A.T.S sensor | TNPA4857AC |
| S | Power Switch | TNPA4858AB |
| GK | Key Switch | TXNGK1DRUM |
| GL | SD LED | TNPA4693AB |
| C1 | Data Driver (Lower Right) | TNPA4987 |
| C2 | Data Driver (Lower Center) | TNPA4988 |
| C3 | Data Driver (Lower Left) | TNPA4989 |
| SC | Scan Drive | TXNSC1DPUJ |
| SS | Sustain Drive | TXNSS1DPUJ |
| SS2 | Sustain out (Lower) | TNPA4980 |
| — | | — |
| SU | Scan out (Upper),Not repairable. SU-Board should be exchanged for service. | TNPA4976 |
| SD | Scan out (Lower),Not repairable. SD-Board should be exchanged for service. | TNPA4977 |

## TH-P50V10A



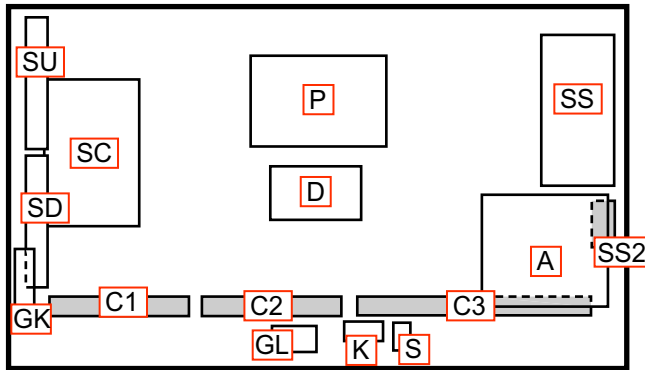| Board Name | Function | Parts Number |
|---|---|---|
| P | Power Supply | ETX2MM747MFK |
| | | — |
| A | DC-DC Converter, Tuner, Speaker out, AV Terminal, AV Switch, PC, Digital Signal Processor, SYSTEM MPU, HDMI Switch, Peaks-AVC, | TXN/A1DRUA |
| D | Format Converter, Plasma AI, Sub-Field Processor | TZTNP02DRUM |
| K | Remote receiver, Power LED, C.A.T.S sensor | TNPA4857AC |
| S | Power Switch | TNPA4858AB |
| GK | Key Switch | TXNGK1DRUM |
| GL | SD LED | TNPA4693AB |
| C1 | Data Driver (Lower Right) | TNPA4767 |
| C2 | Data Driver (Lower Center) | TNPA4768 |
| C3 | Data Driver (Lower Left) | TNPA4769 |
| SC | Scan Drive | TNPA4782AF |
| SS | Sustain Drive | TNPA4783AF |
| SS2 | Sustain out (Lower) | TNPA4804 |
| — | | — |
| SU | Scan out (Upper),Not repairable. SU-Board should be exchanged for service. | TNPA4788 |
| SD | Scan out (Lower),Not repairable. SD-Board should be exchanged for service. | TNPA4789 |

### TH-P50G15A



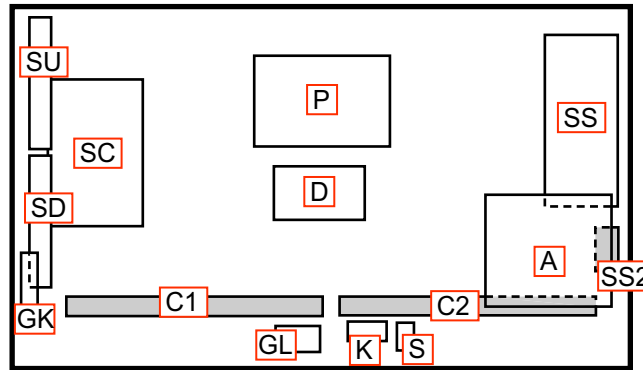| Board Name | Function | Parts Number |
|---|---|---|
| P | Power Supply | ETX2MM747MFK |
| A | DC-DC Converter, Tuner, Speaker out, AV Terminal, AV witch, PC, Digital Signal Processor, SYSTEM MPU, HDMI Switch, Peaks-AVC, Ethernet | TXN/A1JEUA |
| D | Format Converter, Plasma AI, Sub-Field Processor | TZTNP02JDUA |
| K | Remote receiver, Power LED, C.A.T.S sensor | TNPA4857AC |
| S | Power Switch | TNPA4858AB |
| GK | Key Switch | TXNGK1EQUC |
| GL | SD LED | TNPA4693AB |
| C1 | Data Driver (Lower Right) | TNPA4767 |
| C2 | Data Driver (Lower Center) | TNPA4768 |
| C3 | Data Driver (Lower Left) | TNPA4769 |
| SC | Scan Drive | TNPA4782AF |
| SS | Sustain Drive | TNPA4783AF |
| SS2 | Sustain out (Lower) | TNPA4804 |
| SU | Scan out (Upper),Not repairable. SU-Board should be exchanged for service. | TNPA4788 |
| SD | Scan out (Lower),Not repairable. SD-Board should be exchanged for service. | TNPA4789 |

### TH-P42G15A



| Board Name | Function | Parts Number |
|---|---|---|
| P | Power Supply | ETX2MM747MFF |
| A | DC-DC Converter, Tuner, Speaker out, AV Terminal, AV witch, PC, Digital Signal Processor, SYSTEM MPU, HDMI Switch, Peaks-AVC, Ethernet | TXN/A1JEUA |
| D | Format Converter, Plasma AI, Sub-Field Processor | TZTNP02JEUA |
| K | Remote receiver, Power LED, C.A.T.S sensor | TXN/K1EQUC |
| S | Power Switch | TXN/S1EQUC |
| GK | Key Switch | TXNGK1EQUC |
| GL | SD LED | TXNGL1DYUC |
| C1 | Data Driver (Lower Right) | TNPA4762 |
| C2 | Data Driver (Lower Left) | TNPA4763 |
| — | | |
| SC | Scan Drive | TNPA4844AH |
| SS | Sustain Drive | TNPA4783AH |
| SS2 | Sustain out (Lower) | TNPA4802 |
| SU | Scan out (Upper),Not repairable. SU-Board should be exchanged for service. | TNPA4784 |
| SD | Scan out (Lower),Not repairable. SD-Board should be exchanged for service. | TNPA4785 |

## TH-P50G10A

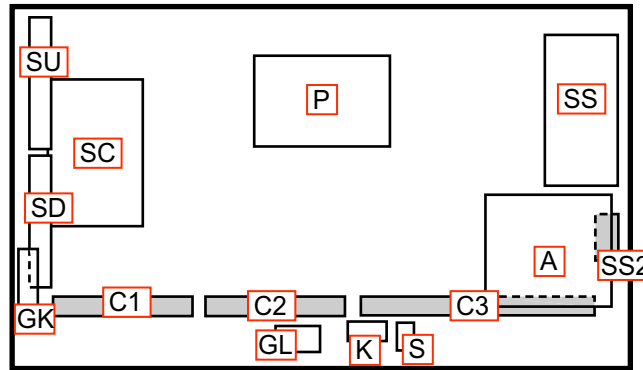| Board Name | Function | Parts Number |
|---|---|---|
| P | Power Supply | ETX2MM747MFK |
| A | DC-DC Converter, Tuner, Speaker out, AV Terminal, AV Switch, PC, Digital Signal Processor, SYSTEM MPU, HDMI Switch, Peaks-AVC, Format Converter, Plasma AI, Sub-Field Processor | TZTNP01DZUA |
| K | Remote receiver, Power LED, C.A.T.S sensor | TXN/K1EQUC |
| GL | SD LED | TXNGL1DYUC |
| S | Power Switch | TXN/S1EQUC |
| GK | Key Switch | TXNGK1EQUC |
| C1 | Data Driver (Lower Right) | TNPA4767 |
| C2 | Data Driver (Lower Center) | TNPA4768 |
| C3 | Data Driver (Lower Left) | TNPA4769 |
| SC | Scan Drive | TNPA4782AB |
| SS | Sustain Drive | TNPA4783AB |
| SS2 | Sustain out (Lower) | TNPA4804 |
| SU | Scan out (Upper),Not repairable. SU-Board should be exchanged for service. | TNPA4788 |
| SD | Scan out (Lower),Not repairable. SD-Board should be exchanged for service. | TNPA4789 |

## TH-P46G10A

| Board Name | Function | Parts Number |
|---|---|---|
| P | Power Supply | ETX2MM747MFK |
| A | DC-DC Converter, Tuner, Speaker out, AV Terminal, AV Switch, PC, Digital Signal Processor, SYSTEM MPU, HDMI Switch, Peaks-AVC, Format Converter, Plasma AI, Sub-Field Processor | TZTNP01EAUA |
| K | Remote receiver, Power LED, C.A.T.S sensor | TXN/K1EQUC |
| GL | SD LED | TXNGL1DYUC |
| S | Power Switch | TXN/S1EQUC |
| GK | Key Switch | TXNGK1EQUC |
| C1 | Data Driver (Lower Right) | TNPA4764 |
| C2 | Data Driver (Lower Center) | TNPA4765 |
| C3 | Data Driver (Lower Left) | TNPA4766 |
| SC | Scan Drive | TNPA4782AC |
| SS | Sustain Drive | TNPA4783AC |
| SS2 | Sustain out (Lower) | TNPA4802 |
| SU | Scan out (Upper),Not repairable. SU-Board should be exchanged for service. | TNPA4786 |
| SD | Scan out (Lower),Not repairable. SD-Board should be exchanged for service. | TNPA4787 |

## TH-P42G10A

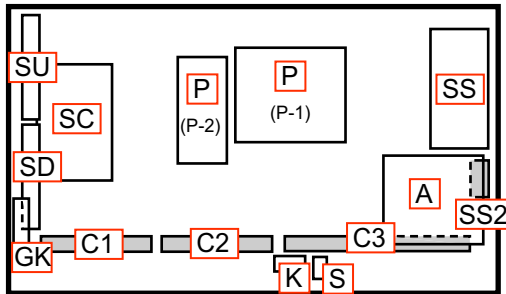| Board Name | Function | Parts Number |
|---|---|---|
| P | Power Supply | ETX2MM747MFF |
| A | DC-DC Converter, Tuner, Speaker out, AV Terminal, AV Switch, PC, Digital Signal Processor, SYSTEM MPU, HDMI Switch, Peaks-AVC, Format Converter, Plasma AI, Sub-Field Processor | TZTNP01EBUA |
| K | Remote receiver, Power LED, C.A.T.S sensor | TXN/K1EQUC |
| GL | SD LED | TXNGL1DYUC |
| S | Power Switch | TXN/S1EQUC |
| GK | Key Switch | TXNGK1EQUC |
| C1 | Data Driver (Lower Right) | TNPA4762 |
| C2 | Data Driver (Lower Left) | TNPA4763 |
| — | | |
| SC | Scan Drive | TNPA4844AD |
| SS | Sustain Drive | TNPA4783AD |
| SS2 | Sustain out (Lower) | TNPA4802 |
| SU | Scan out (Upper),Not repairable. SU-Board should be exchanged for service. | TNPA4784 |
| SD | Scan out (Lower),Not repairable. SD-Board should be exchanged for service. | TNPA4785 |

## TH-P54S10A



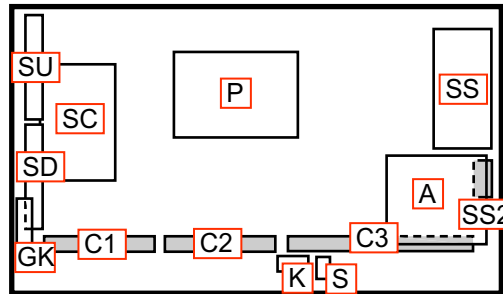| Board Name | Function | Parts Number |
|---|---|---|
| P | Power Supply | ETX2MM761MGN |
| A | DC-DC Converter, Tuner, Speaker out, AV Terminal, AV Switch, PC, Digital Signal Processor, SYSTEM MPU, HDMI Switch, Peaks-AVC, Format Converter, Plasma AI, Sub-Field Processor | TZTNP01ECUA |
| K | Remote receiver, Power LED, C.A.T.S sensor | TNPA4857AC |
| S | Power Switch | TNPA4858AB |
| GK | Key Switch | TNPA4875AB |
| C1 | Data Driver (Lower Right) | TNPA4770 |
| C2 | Data Driver (Lower Center) | TNPA4771 |
| C3 | Data Driver (Lower Left) | TNPA4772 |
| SC | Scan Drive | TNPA4844AM |
| SS | Sustain Drive | TNPA4783AM |
| SS2 | Sustain out (Lower) | TNPA4804 |
| SU | Scan out (Upper), Not repairable. SU-Board should be exchanged for service. | TNPA4790 |
| SD | Scan out (Lower), Not repairable. SD-Board should be exchanged for service. | TNPA4791 |

## TH-P50S10A



| Board Name | Function | Parts Number |
|---|---|---|
| P | Power Supply | ETX2MM747MFG |
| A | DC-DC Converter, Tuner, Speaker out, AV Terminal, AV Switch, PC, Digital Signal Processor, SYSTEM MPU, HDMI Switch, Peaks-AVC, Format Converter, Plasma AI, Sub-Field Processor | TZTNP02EDUA |
| K | Remote receiver, Power LED, C.A.T.S sensor | TXN/K1EQUC |
| S | Power Switch | TXN/S1EQUC |
| GK | Key Switch | TXNGK1EQUC |
| C1 | Data Driver (Lower Right) | TNPA4767 |
| C2 | Data Driver (Lower Center) | TNPA4768 |
| C3 | Data Driver (Lower Left) | TNPA4769 |
| SC | Scan Drive | TXNSC1EDUC |
| SS | Sustain Drive | TXNSS1EDUC |
| SS2 | Sustain out (Lower) | TNPA4804 |
| SU | Scan out (Upper), Not repairable. SU-Board should be exchanged for service. | TNPA4788AC |
| SD | Scan out (Lower), Not repairable. SD-Board should be exchanged for service. | TNPA4789AC |

## TH-P46S10A



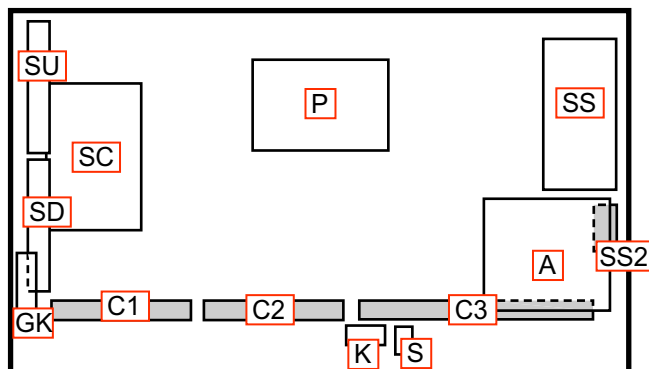| Board Name | Function | Parts Number |
|---|---|---|
| P | Power Supply | ETX2MM747MFG |
| A | DC-DC Converter, Tuner, Speaker out, AV Terminal, AV Switch, PC, Digital Signal Processor, SYSTEM MPU, HDMI Switch, Peaks-AVC, Format Converter, Plasma AI, Sub-Field Processor | TZTNP01EEUA |
| K | Remote receiver, Power LED, C.A.T.S sensor | TXN/K1EQUC |
| S | Power Switch | TXN/S1EQUC |
| GK | Key Switch | TXNGK1EQUC |
| C1 | Data Driver (Lower Right) | TNPA4764 |
| C2 | Data Driver (Lower Center) | TNPA4765 |
| C3 | Data Driver (Lower Left) | TNPA4766 |
| SC | Scan Drive | TXNSC1EEUC |
| SS | Sustain Drive | TXNSS1EEUC |
| SS2 | Sustain out (Lower) | TNPA4802 |
| SU | Scan out (Upper), Not repairable. SU-Board should be exchanged for service. | TNPA4786AC |
| SD | Scan out (Lower), Not repairable. SD-Board should be exchanged for service. | TNPA4787AC |

## TH-P42S10A



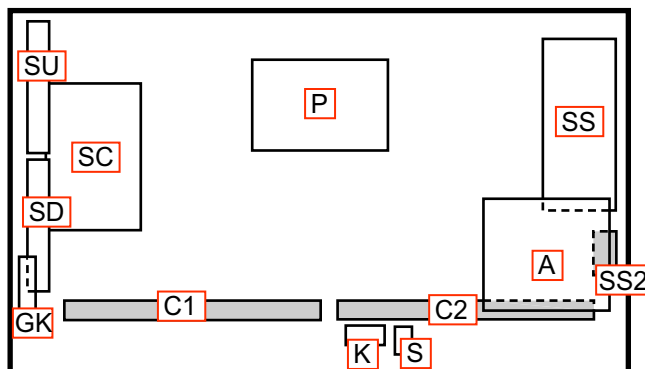| Board Name | Function | Parts Number |
|---|---|---|
| P | Power Supply | ETX2MM747MFE |
| A | DC-DC Converter, Tuner, Speaker out, AV Terminal, AV Switch, PC, Digital Signal Processor, SYSTEM MPU, HDMI Switch, Peaks-AVC, Format Converter, Plasma AI, Sub-Field Processor | TZTNP03EFUA |
| K | Remote receiver, Power LED, C.A.T.S sensor | TXN/K1EQUC |
| S | Power Switch | TXN/S1EQUC |
| GK | Key Switch | TXNGK1EQUC |
| C1 | Data Driver (Lower Right) | TNPA4762 |
| C2 | Data Driver (Lower Left) | TNPA4763 |
| — | — | — |
| SC | Scan Drive | TXNSC1EFUC |
| SS | Sustain Drive | TXNSS1EFUC |
| SS2 | Sustain out (Lower) | TNPA4802 |
| SU | Scan out (Upper), Not repairable. SU-Board should be exchanged for service. | TNPA4784 |
| SD | Scan out (Lower), Not repairable. SD-Board should be exchanged for service. | TNPA4785 |

## TH-P50X10A/TH-P50X14A



## TH-P42X10A/TH-P42X14A



| Board Name | Function | Parts Number |
|---|---|---|
| P | Power Supply | LSEP1279EEHB |
| A | DC-DC Converter, Tuner, Speaker out, AV Terminal, AV Switch, Digital Signal Processor, SYSTEM MPU, HDMI Switch, Peaks-lite2p, Format Converter, Plasma AI, Sub-Field Processor | TZTNP01EPUA (for TH-P50X10A) TZTNP01FDUA (for TH-P50X14A) |
| K | Remote receiver, Power LED, C.A.T.S sensor | TXN/K1EQUC |
| S | Power Switch | TXN/S1EQUC |
| GK | Key Switch | TXNGK1EQUC |
| C1 | Data Driver (Lower Right) | TXNC11EPUC |
| C2 | Data Driver (Lower Center) | TXNC21EPUC |
| C3 | Data Driver (Lower Left) | TXNC31EPUC |
| SC | Scan Drive | TXNSC1EPUC |
| SS | Sustain Drive | TXNSS1EPUC |
| SS2 | Sustain out (Lower) | TXNSS21EPUC |
| SU | Scan out (Upper),Not repairable. SU-Board should be exchanged for service. | TXNSU1EPUC |
| SD | Scan out (Lower),Not repairable. SD-Board should be exchanged for service. | TXNSD1EPUC |

| Board Name | Function | Parts Number |
|---|---|---|
| P | Power Supply | LSEP1279BEHB |
| A | DC-DC Converter, Tuner, Speaker out, AV Terminal, AV Switch, Digital Signal Processor, SYSTEM MPU, HDMI Switch, Peaks-lite2p, Format Converter, Plasma AI, Sub-Field Processor | TZTNP01EQUA (for TH-P42X10A) TZTNP01FEUA (for TH-P42X14A) |
| K | Remote receiver, Power LED, C.A.T.S sensor | TXN/K1EQUC |
| S | Power Switch | TXN/S1EQUC |
| GK | Key Switch | TXNGK1EQUC |
| C1 | Data Driver (Lower Right) | TNPA4892 |
| C2 | Data Driver (Lower Left) | TNPA4893 |
| — | | |
| SC | Scan Drive | TXNSC1EQUA |
| SS | Sustain Drive | TXNSS1EQUC |
| SS2 | Sustain out (Lower) | TNPA4807 |
| SU | Scan out (Upper),Not repairable. SU-Board should be exchanged for service. | TXNSU1EQUA |
| SD | Scan out (Lower),Not repairable. SD-Board should be exchanged for service. | TXNSD1EQUA |

# 3. PCB List

# 3. PCB List

| | V10 series | | | G15 series | | G10 series | | | S10 series | | | | X10 series / X14 series | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Board | TH-P65V10A | TH-P58V10A | TH-P50V10A | TH-P50G15A | TH-P42G15A | TH-P50G10A | TH-P46G10A | TH-P42G10A | TH-P54S10A | TH-P50S10A | TH-P46S10A | TH-P42S10A | TH-P50X10A | TH-P42X10A | TH-P50X14A | TH-P42X14A |
| P(SUS) | ETX2MM774MG | ETX2MM774MF | ETX2MM747MFK | ETX2MM747MFK | ETX2MM747MFF | ETX2MM747MFK | ETX2MM747MFK | ETX2MM747MFF | ETX2MM761MGN | ETX2MM747MFG | ETX2MM747MFG | ETX2MM747MFE | LSEP1279EEHB | LSEP1279BEHB | LSEP1279EEHB | LSEP1279BEHB |
| P(MULTI) | ETX2MM774MA | ETX2MM774MA | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| A | TXN/A1DRUA | TXN/A1DRUA | TXN/A1DRUA | TXN/A1JEUA | TXN/A1JEUA | TZTNP01DZUA | TZTNP01EAUA | TZTNP01EBUA | TZTNP01ECUA | TZTNP02EDUA | TZTNP01EEUA | TZTNP03EFUA | TZTNP01EPUA | TZTNP01EQUA | TZTNP01FDUA | TZTNP01FEUA |
| D | TZTNP02DNUM | TZTNP02DPUM | TZTNP02DRUM | TZTNP02JDUA | TZTNP02JEUA | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| K | TNPA4857AC | TNPA4857AC | TNPA4857AC | TNPA4857AC | TXN/K1EQUC | TXN/K1EQUC | TXN/K1EQUC | TXN/K1EQUC | TNPA4857AC | TXN/K1EQUC | TXN/K1EQUC | TXN/K1EQUC | TXN/K1EQUC | TXN/K1EQUC | TXN/K1EQUC | TXN/K1EQUC |
| S | TNPA4858AB | TNPA4858AB | TNPA4858AB | TNPA4858AB | TXN/S1EQUC | TXN/S1EQUC | TXN/S1EQUC | TXN/S1EQUC | TNPA4858AB | TXN/S1EQUC | TXN/S1EQUC | TXN/S1EQUC | TXN/S1EQUC | TXN/S1EQUC | TXN/S1EQUC | TXN/S1EQUC |
| GK | TNPA4875AB | TXNGK1DRUM | TXNGK1DRUM | TXNGK1EQUC | TXNGK1EQUC | TXNGK1EQUC | TXNGK1EQUC | TXNGK1EQUC | TNPA4875AB | TXNGK1EQUC | TXNGK1EQUC | TXNGK1EQUC | TXNGK1EQUC | TXNGK1EQUC | TXNGK1EQUC | TXNGK1EQUC |
| GL | TNPA4693AB | TNPA4693AB | TNPA4693AB | TNPA4693AB | TXNGL1DYUC | TXNGL1DYUC | TXNGL1DYUC | TXNGL1DYUC | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| C1 | TNPA4990 | TNPA4987 | TNPA4767 | TNPA4767 | TNPA4762 | TNPA4767 | TNPA4764 | TNPA4762 | TNPA4770 | TNPA4767 | TNPA4764 | TNPA4762 | TXNC11EPUC | TNPA4892 | TXNC11EPUC | TNPA4892 |
| C2 | TNPA4991 | TNPA4988 | TNPA4768 | TNPA4768 | TNPA4763 | TNPA4768 | TNPA4765 | TNPA4763 | TNPA4771 | TNPA4768 | TNPA4765 | TNPA4763 | TXNC21EPUC | TNPA4893 | TXNC21EPUC | TNPA4893 |
| C3 | TNPA4992 | TNPA4989 | TNPA4769 | TNPA4769 | ---- | TNPA4769 | TNPA4766 | ---- | TNPA4772 | TNPA4769 | TNPA4766 | ---- | TXNC31EPUC | ---- | TXNC31EPUC | ---- |
| SC | TXNSC1DNUJ | TXNSC1DPUJ | TNPA4782AF | TNPA4782AF | TNPA4844AH | TNPA4782AB | TNPA4782AC | TNPA4844AD | TNPA4844AM | TXNSC1EDUC | TXNSC1EEUC | TXNSC1EFUC | TXNSC1EPUC | TXNSC1EQUA | TXNSC1EPUC | TXNSC1EQUA |
| SS | TXNSS1DNUJ | TXNSS1DPUJ | TNPA4783AF | TNPA4783AF | TNPA4783AH | TNPA4783AB | TNPA4783AC | TNPA4783AD | TNPA4783AM | TXNSS1EDUC | TXNSS1EEUC | TXNSS1EFUC | TXNSS1EPUC | TXNSS1EQUC | TXNSS1EPUC | TXNSS1EQUC |
| SS2 | TNPA4983 | TNPA4980 | TNPA4804 | TNPA4804 | TNPA4802 | TNPA4804 | TNPA4802 | TNPA4802 | TNPA4804 | TNPA4804 | TNPA4802 | TNPA4802 | TXNSS21EPUC | TNPA4807 | TXNSS21EPUC | TNPA4807 |
| SS3 | TNPA4984 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| SU | TNPA4981 | TNPA4976 | TNPA4788 | TNPA4788 | TNPA4784 | TNPA4788 | TNPA4786 | TNPA4784 | TNPA4790 | TNPA4788AC | TNPA4786AC | TNPA4784 | TXNSU1EPUC | TXNSU1EQUA | TXNSU1EPUC | TXNSU1EQUA |
| SD | TNPA4982 | TNPA4977 | TNPA4789 | TNPA4789 | TNPA4785 | TNPA4789 | TNPA4787 | TNPA4785 | TNPA4791 | TNPA4789AC | TNPA4787AC | TNPA4785 | TXNSD1EPUC | TXNSD1EQUA | TXNSD1EPUC | TXNSD1EQUA |

# 4. Block Diagram

## &lt;PCB Function&gt;

**[ e.g. TH-P50V10A ]**



**IC8301**
   : Front End Processor
**IC3001**
   : AV Switch
**IC4001**
   : GC3FS next

**IC4510**
   : HDMI I/F, 10bit A/D
**IC8001**
   : Peaks AVC (MAIN MPU+VIDEO PROCESSOR)
**IC5110**
   : LVDS RX
**IC5100**
   : GC6
   Video Processor IC (Format Converter)
   LVDS Transmitter
**IC2600**
   : FRC-Q
**IC1100**
   : Genx8  (SYSTEM MPU)

**IC9300**
   : PD3-H
   LVDS Receiver,
   Sub Field Processor,
   Data Driver Processor
   Plasma AI
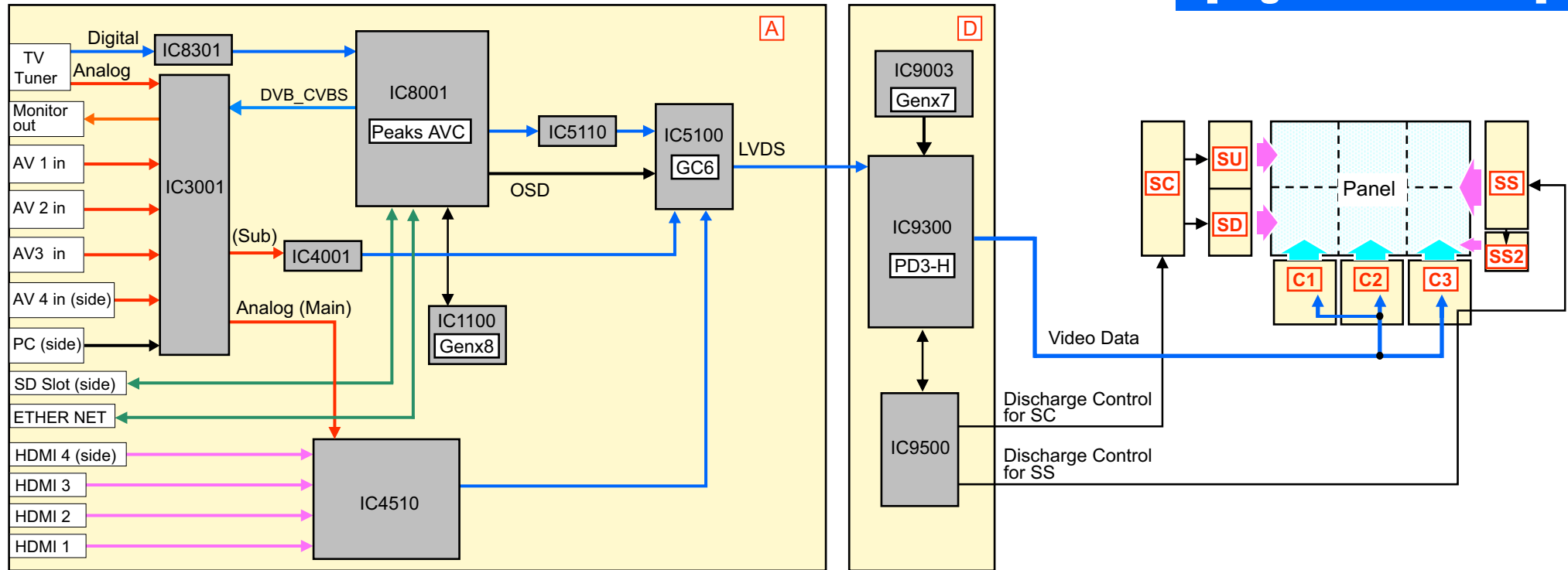**IC9500**
   : FPGA (Discharge Control)
**IC9003**
   : Genx7 (Panel Micom)

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## <PCB Function>

**[ e.g. TH-P50G15A ]**



**IC8301**
  : Front End Processor
**IC3001**
  : AV Switch
**IC4001**
  : GC3FS next

**IC4510**
  : HDMI I/F, 10bit A/D
**IC8001**
  : Peaks AVC (MAIN MPU+VIDEO PROCESSOR)
**IC5110**
  : LVDS RX
**IC5100**
  : GC6
  Video Processor IC (Format Converter)
  LVDS Transmitter
**IC2600**
  : FRC-Q
**IC1100**
  : Genx8  (SYSTEM MPU)

**IC9300**
  : PD3-H
    LVDS Receiver,
    Sub Field Processor,
    Data Driver Processor
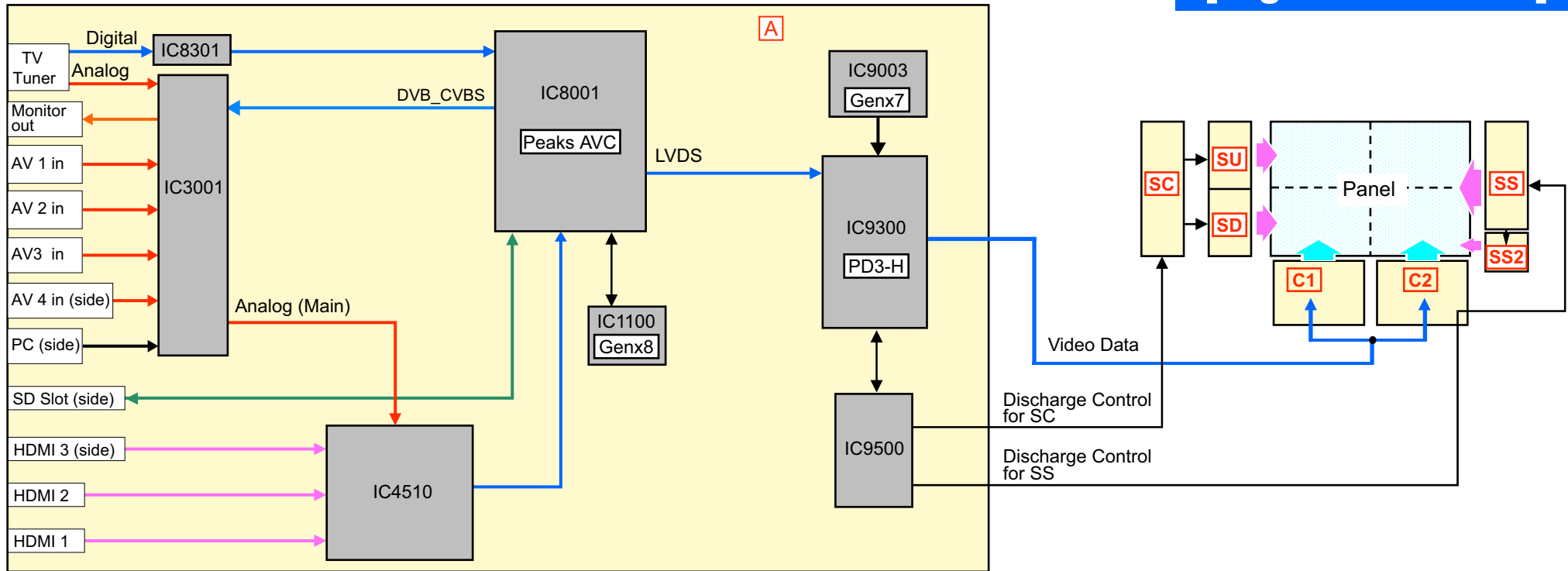    Plasma AI
**IC9500**
  : FPGA (Discharge Control)
**IC9003**
  : Genx7 (Panel Micom)

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## &lt;PCB Function&gt;

**[ e.g. TH-P42G10A ]**



**IC8301**
  : Front End Processor
**IC3001**
  : AV Switch

**IC4510**
  : HDMI I/F, 10bit A/D
**IC8001**
  : Peaks AVC (MAIN MPU+VIDEO PROCESSOR)

**IC1100**
  : Genx8 (SYSTEM MPU)

**IC9300**
  : PD3-H
    LVDS Receiver,
    Sub Field Processor,
    Data Driver Processor
    Plasma AI
**IC9500**
  : FPGA (Discharge Control)
**IC9003**
  : Genx7 (Panel Micom)

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## <PCB Function>

**IC8301**
  : Front End Processor
**IC3001**
  : AV Switch

**IC4510**
  : HDMI I/F, 10bit A/D
**IC8001**
  : Peaks AVC (MAIN MPU+VIDEO PROCESSOR)

**IC1100**
  : Genx8  (SYSTEM MPU)

**IC9300**
  : PD3-H
    LVDS Receiver,
    Sub Field Processor,
    Data Driver Processor
    Plasma AI
**IC9500**
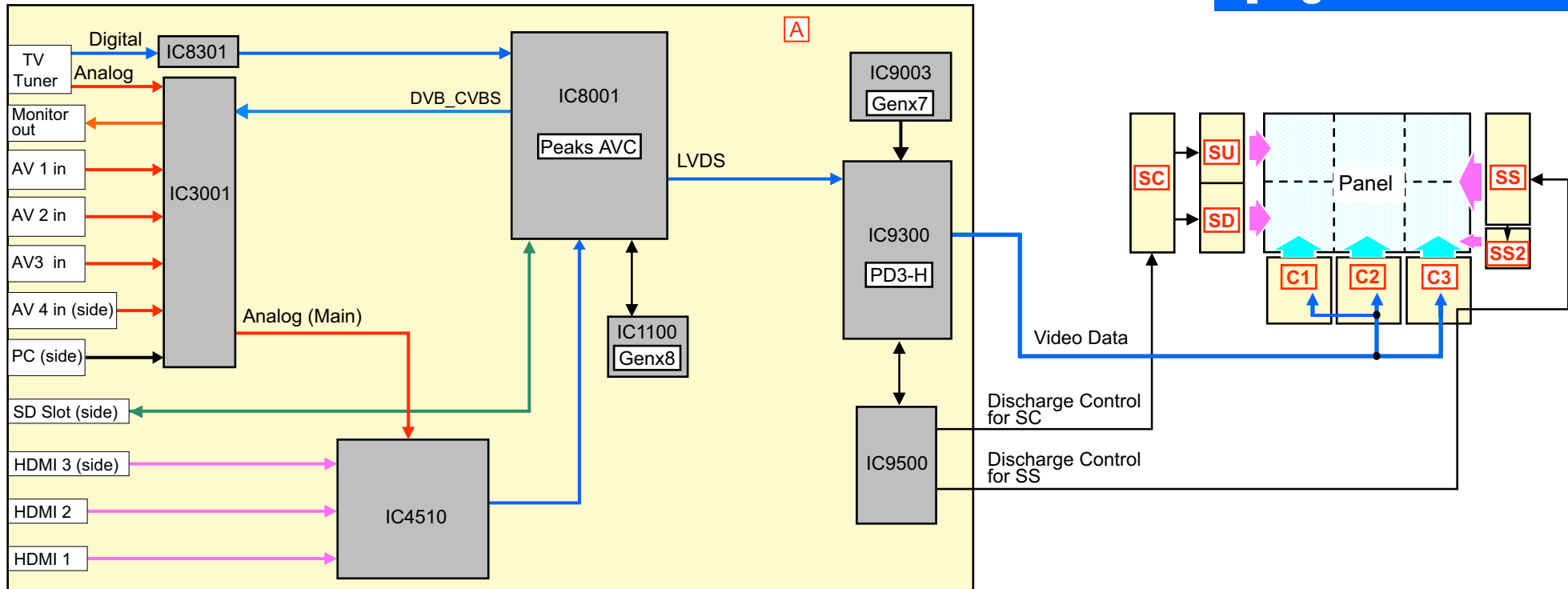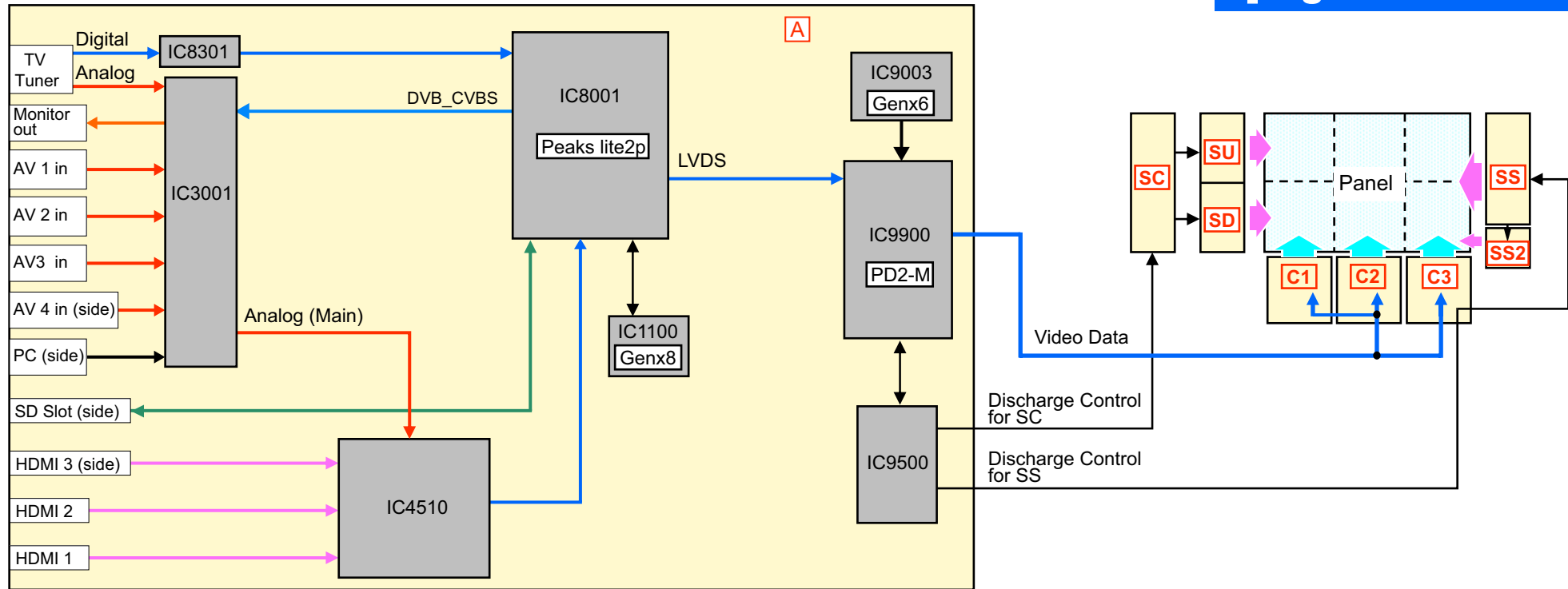  : FPGA (Discharge Control)
**IC9003**
  : Genx7 (Panel Micom)

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## 4.Block Diagram — Signal Processing Circuit (5) X10/X14 Series

### <PCB Function>   [ e.g. TH-P50X10A ]



IC8301
: Front End Processor
IC3001
: AV Switch

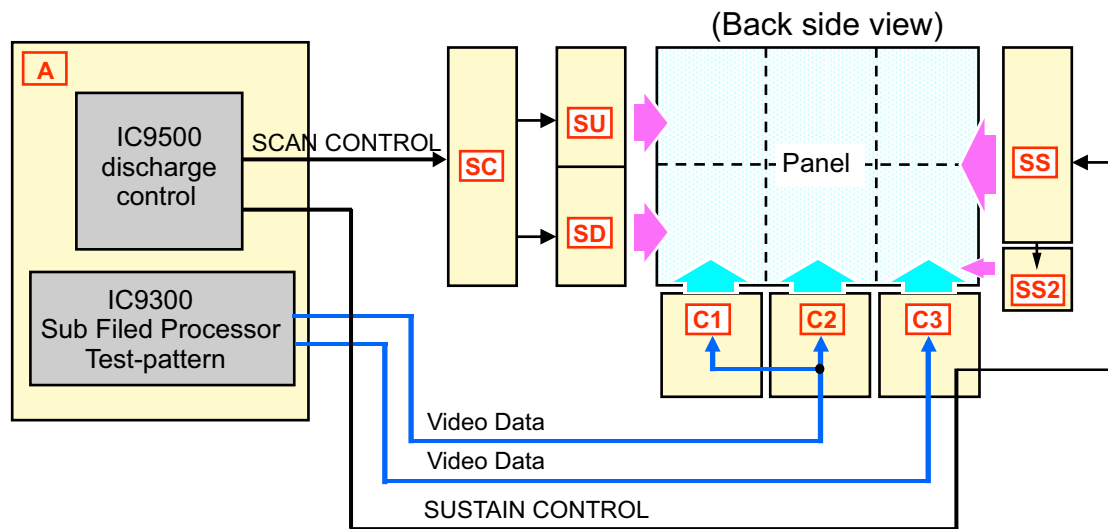IC4510
: HDMI I/F, 10bit A/D
IC8001
: Peaks lite2p
(MAIN MPU+VIDEO PROCESSOR)
IC1100
: Genx8 (SYSTEM MPU)

IC9900
: PD2-M
LVDS Receiver,
Sub Field Processor,
Data Driver Processor
Plasma AI
IC9500
: FPGA (Discharge Control)
IC9003
: Genx6 (Panel Micom)

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# 5. Troubleshooting

We know the possible defective board by picture trouble area.

<Display device block diagram>

<Relation of defective board and picture trouble area >

(Back side view)

A

IC9500 discharge control

SCAN CONTROL

SC

SU

SD

Panel

SS

SS2

IC9300 Sub Filed Processor Test-pattern

C1   C2   C3

Video Data

Video Data

SUSTAIN CONTROL

(Back side view)

SU

SC (all)

SD

SS (all)

C1   C2   C3

A (all)
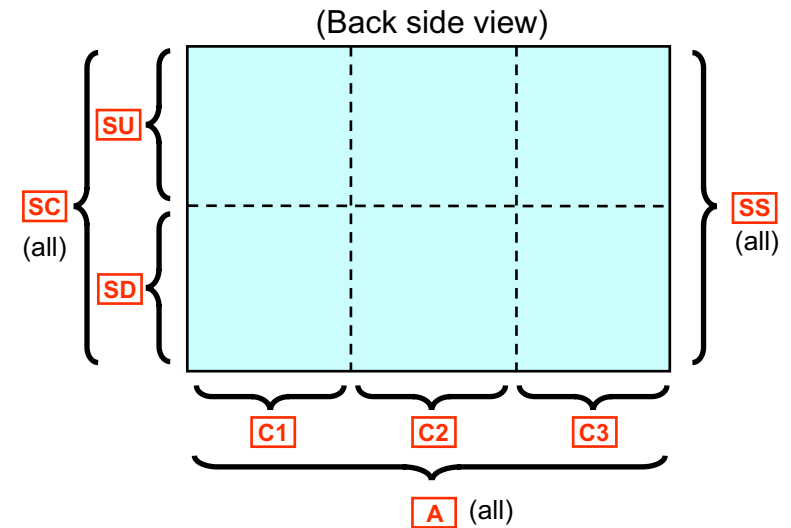
* In case of V10 series and G15 series, A board change to D board.

PDP panel defective (Data driver IC defective)

Data driver IC or C or A board defective

Width is narrower than FPC
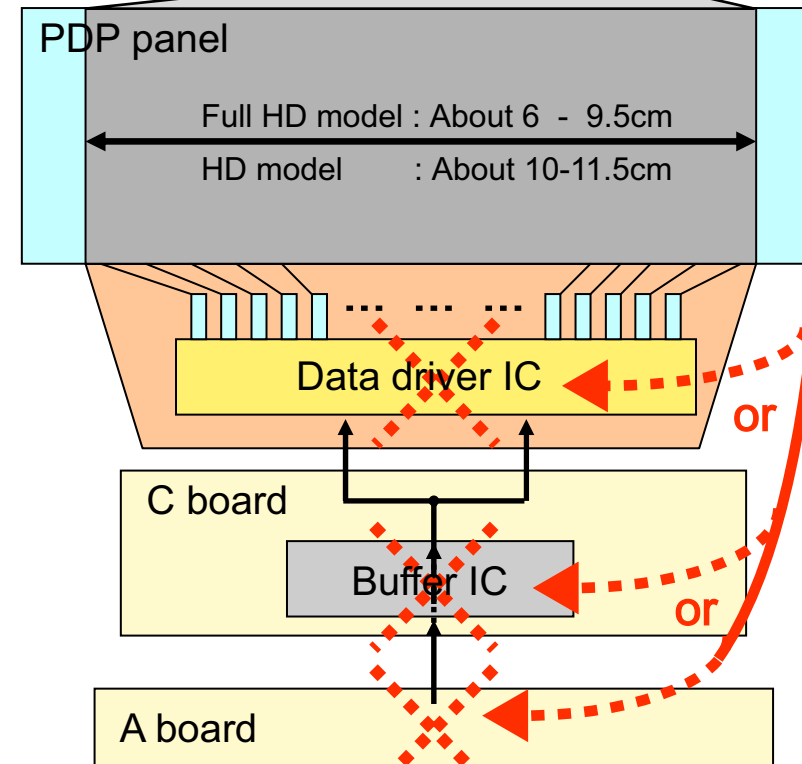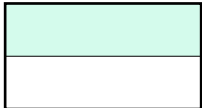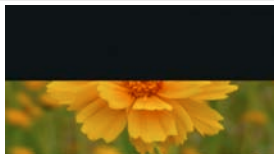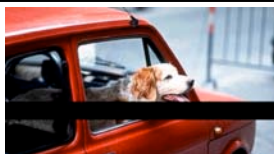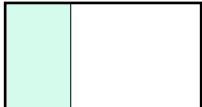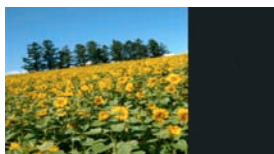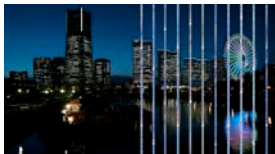
Width is same as FPC

Data driver IC defect= PDP panel defect

PDP panel

1 line defect

defect

PDP panel

Full HD model : About 6 - 9.5cm

HD model : About 10-11.5cm

Data driver IC

C board

Buffer IC

Data driver IC

or

C board

Buffer IC

or

A board

* In case of V10/G15 series, A board change to D board.

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## < Some part of screen >
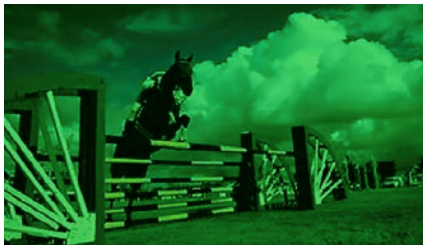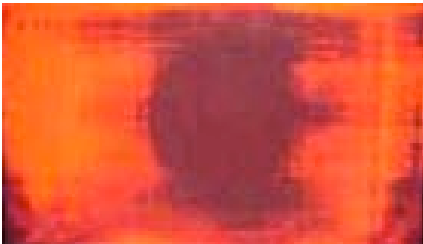
| Symptom | Actual symptom | | Defective board |
|---|---|---|---|
| Trouble at Upper or Lower half | | | SU / SD board |
| Horizontal line (Upper or Lower side) | | | SU / SD board or PDP panel |
| Trouble at Left or Center or Right part (42 inch : Left or Right half) | | | C1-C3 board (42 inch : C1,C2) |
| Vertical line (Width is same as FPC) | | | C or A board or PDP panel<br>* In case of V10/G15 series , A board change to D board. |
| Vertical line (Width is narrower than FPC) | | | PDP panel |
| Regular bar (*1) | | | A board<br>* In case of V10/G15 series , defective board is A board or D board. |

(*1) In case of V10/G15 series, we can judge A-board or D-board is failure by using Test Pattern.
    Please refer to Page 24, 25.

## < All area of screen >

| Symptom | Actual symptom | | Defective board |
|---------|----------------|---|-----------------|
| Irregular Color<br><br>(*1) |  |  | **A board**<br><br>* In case of V10/G15 series , defective board is A board or D board. |
| All vertical line<br><br>(*1) |  |  | **A board**<br><br>* In case of V10/G15 series , defective board is A board or D board. |
| Abnormal electric discharge | <br> |  | **SC / SS board** |

(*1) In case of V10/G15 series, we can judge A-board or D-board is failure by using Test Pattern.
   Please refer to Page 24, 25.

<Purpose>

Test pattern is helpful to find the defective parts.
For example, if we can see the picture problem at all over the screen (Picture Noise, Full Vertical Line, Abnormal color),
we can find signal processing problem or panel phosphor problem by using test pattern.

<Model>

PDP 2009 Models
(V10,G15,G10,S10,X10,X14 series)

<Symptom>

Picture Noise, Full Vertical Line,
Abnormal color

<How to enter the Test Pattern>

1. While pressing "VOLUME ( - )" button of
   the main unit, press " 0 " button of
   the remote control three times within
   2 seconds.
2. Push button " 1 " of Remote Controller
   several times,and select " Aging " setting,
   then " Test pattern " will appear.
3. Push " 3 " button of Remote Controller
   to select the test pattern mode to forward.
4. Push " 4 " button of Remote Controller
   to select the test pattern mode to reverse.

<Test Pattern (Normal)>

Tuner Block (1-3)          Panel Block (4-20)

| | | |
|---|---|---|
| TIME 0 | | 0 |
| 1:R/G/B/W | 2: Black | 3:White (with character) |

| | | | | |
|---|---|---|---|---|
| 4:White | 5:Red | 6:Green | 7:Blue | 8:ON/OFF Aging |

20:Dark Blue

9:Ramp White

19:Dark Green

10:Ramp Red

| 18:Dark Red | 17:White Frame | 16:Scroll | 15:A and B zone | 14:Color bar | 13:1% Window | 12:Ramp Blue | 11:Ramp Green |

<Diagnosis>
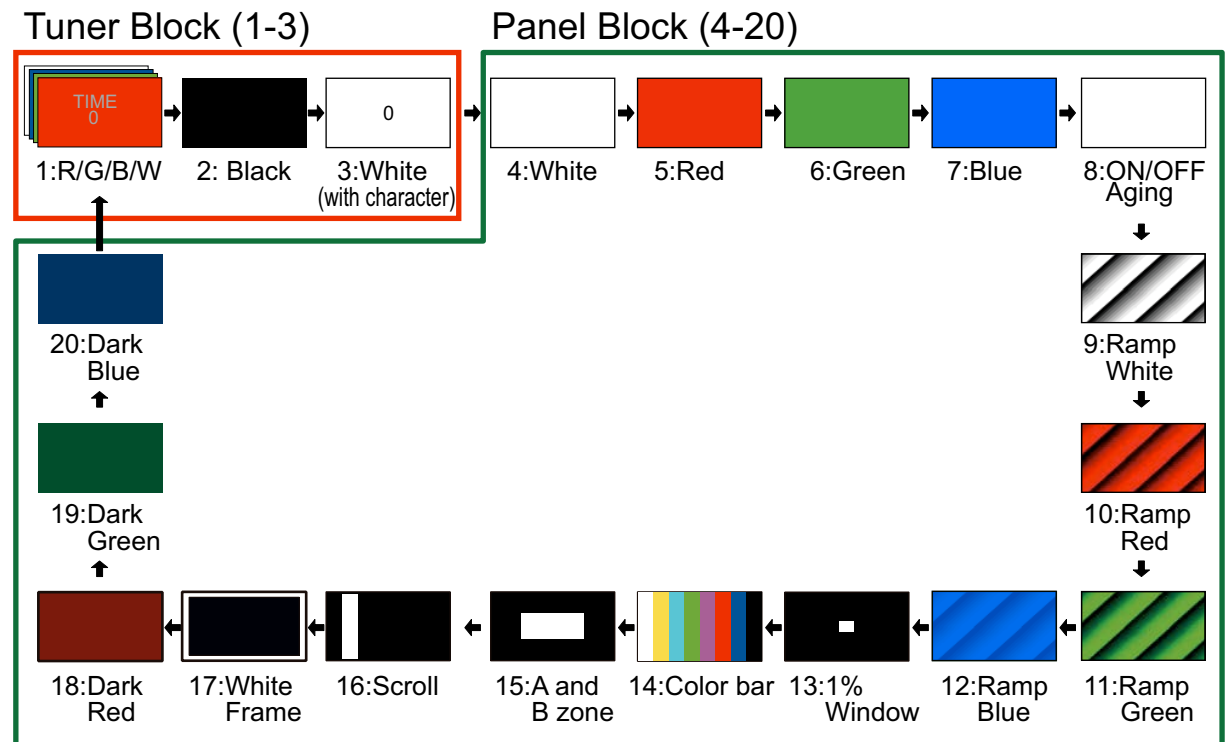
How to diagnose by using test pattern.

> Abnormal picture
> (Picture Noise, Full Vertical Line, Abnormal color)

(1) In case of V10/G15 series

| Test pattern (4-20) | Defective Block  [ Board ] |
|---|---|
| Abnormal | Panel Block  [ D  (SC/SS) Board ] |
| Normal | Tuner Block  [ A Board ] |

(2) In case of G10/S10/X10/X14 series

| Test pattern (4-20) | Defective Block  [ Board ] |
|---|---|
| Abnormal | Panel Block  [ A  (SC/SS) Board ] |
| Normal | Tuner Block  [ A Board ] |

# 6. Service Information

<How to enter into Service Mode>

While pressing [VOLUME ( - )] button of the main unit, press [ i ] button of the remote control three times within 2 seconds.

Software version

Main items

| | |
|---|---|
| SERVICE | |
| ADJUST | ← picture adjustment |
| WB-ADJ | ← White balance adjustment |
| OPTION | ← Option setting |
| AGING | ← Aging |
| SRV-TOOL | ← Service tool |

| | | | |
|---|---|---|---|
| Peaks-SOFT | 0.171 | OPTION 1 | 2c |
| Peaks-EEP | 00.30.0797 | OPTION 2 | 00 |
| LSI DATA | 0.00.00 | OPTION 3 | 00 |
| STBY SOFT | 1.01.00 | Model ID | 05 |
| STBY EEP | 1.00.00 | | 02012100 |
| STBY ROMCOR | 0.00.00 | | 00000020 |
| PDP-SOFT | 01.06 | RB Cnt | 003 |
| PDP-EEP | 40.06 | | |
| PDP-FPGA | 10.10 | | |
| PDP-PDROM | 40.06 | | |

Press [1]Button

Main Item    Sub Item    Data

| | |
|---|---|
| ADJUST | |
| CONTRST | 0000 |
| YMAX | |

Key command

[1] button...Main items Selection in forward direction

[2] button...Main items Selection in reverse direction

[3] button...Sub items Selection in forward direction

[4] button...Sub items Selection in reverse direction

[VOL] button...Value of sub items change in forward direction ( + ), in reverse direction ( - )

Press [ OK ] to memorize the value.

## \<Service tool mode\>

### How to access

1. Select [SRV-TOOL] in Service Mode.
2. Press [OK] button on the remote control.

| SRV-TOOL | |
|---|---|
| | |
| | |
| | |
| TD2Microcode:81c0000e | |
| Flash ROM : 1-227E | |
| PTCT : 00.00.00.00.00 | Time 00000:40　　On/Off 0000022 |

Display of TD2Microcode version →　TD2Microcode:81c0000e

Display of Flash ROM maker code →　Flash ROM : 1-227E

Display of SOS History →　PTCT : 00.00.00.00.00

POWER ON TIME,On/Off dieplay position

### Display of SOS History

SOS History (Number of LED blinking) indication.

Latest SOS　Previous SOS　Second Previous SOS

PTCT : 00 . 00 . 00 . 00 . 00

Second SOS after shipping　　First SOS after shipping
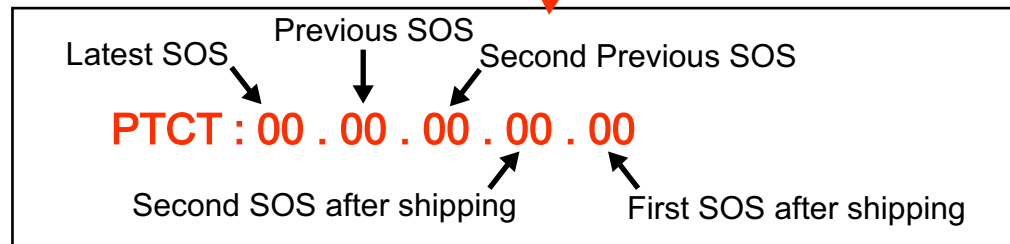
### POWER ON TIME,On/Off

Move the corsol to right low position and press [ MUTE ] button for 3sec.

Time 00000 : 40　　　On/Off 0000022
　　　Hour　Minute　　　　　　times

Note : This indication will not be cleared by either of the self-check or any command.

### Exit

1. Disconnect the AC cord from wall outlet or switch off the power with the [POWER] button on the main unit.

<Contents>

As a convenient function for failure diagnosis, local maintenance function is installed
to memorize log of error messages of digital broadcasting system.
By using this function analysis of troubles can be done.

<Available models>

2009 PDP  models (only digital model)

<How to enter Local Maintenance display>

(1) Access SRV-TOOL display
Enter service mode, select SRV-TOOL, and push "OK" key by the remote control.
(2) Enter Log display of Local Maintenance.
By using four directions (UP, DOWN,RIGHT,LEFT), select upper-left cell of SRV-TOOL
and push "OK" key for about three seconds.
The characters of Local Maintenance are indicated.
And perss "OK" key again.
Log display of Local Maintenance starts.



Service mode Top display          SRV-TOOL display          Before of Local                After of Local                Log display
                                                            Maintenance display           Maintenance display

● Escape from Local maintenance display -------- Switch off the [POWER] button.
● How to delete Log data ------- Set factory shipping conditions by self check. (refer to page 37)

\<Log construction of Local Maintenance\>

The explanation of log

[ 2009 PAL digital models ]

1. cec.log      - - -  For the design section to analyze

2. err_panel.log  - - - log of error message of digital broadcasting,time, kind and date reception level

                 (refer to page 31)

3. pow_msg.log - - -  For the design section to analyze

4. record1.log    - - -  For the design section to analyze

5. sig_msg.log   - - -  For the design section to analyze

&lt;Log construction of Local Maintenance&gt;

How to read log data

[ err_panel.log data ]

300109  194903  001  0  00  03

day/month/year (30/1/2009)

hour/min/sec (19/49/03)
Local time is indicated.

Logical channel

Signal strength

Signal quality

Error No. (0: No signal/Refer to below table)
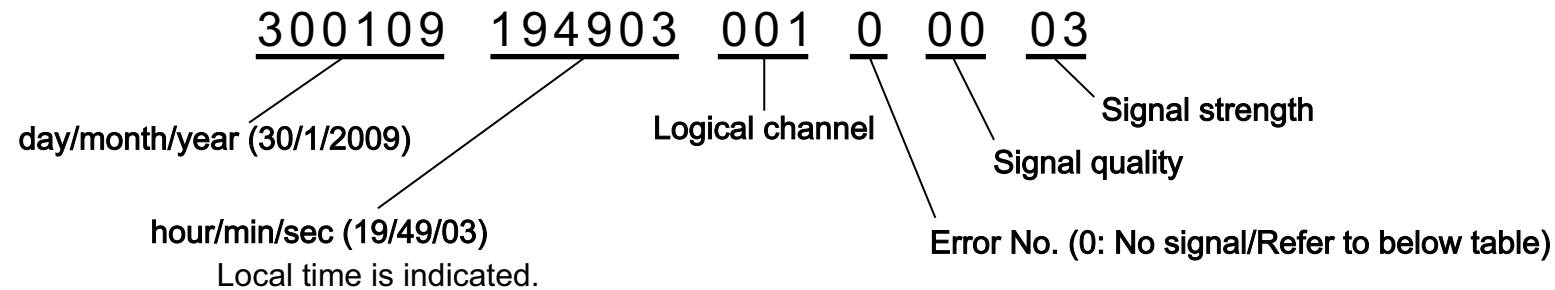
Kind of Error panel of Error No.

| Error No. | Kind of Error panel | Remarks |
|-----------|---------------------|---------|
| 0 | NO SIGNAL | |
| 1 | NO SERVICE AVALABLE | |
| 2 | NO VIDEO | |
| 3 | INVALID DVB CHANNEL | |
| 4 | ENCRIPTED | |

<Data copy function of Local Maintenance Log to SD card>

Log of Local Maintenance can be copied by Data Copy function to SD card and log data can be confirmed by PC.

<Steps to Data copy to SD card (TV set ➡ SD card)>

1. Making "starting file" in SD card
   According to the function to use, make pwd file to start.
   And keep it to SD card.
   **pwd file name - - - localmainte.pwd**

   > How to make pwd file :
   >     Create new (blank) Text file and change file name.

2. Power ON TV set and insert SD card with pwd file.
   Automatically, Data Copy function display appears.

   > Note) Keep only one kind of pwd file in SD card.
   >     If there are several pwd files, it may not work.

3. Input Pass word and perform Data Copy.
   Input  Pass word (0813)   for Data copy to SD card and perform Data Copy.

4. Completion of Data Copy
   After data copy completion is indicated, pull out SD card.
   In SD card, new folder is made and in this folder, several logs are copied.

   > Note) No function to copy from SD card to TV set.

5. Power off the TV.

   > Note) By using PC, text data can be read.
   >     And if data is not text data,  change the suffix to txt
   >     or read by using  the text editor.



(Local maintenance)
Is indicated.

Input Pass word (0813)

Password Input

Completion display

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<From TV set to SD card>
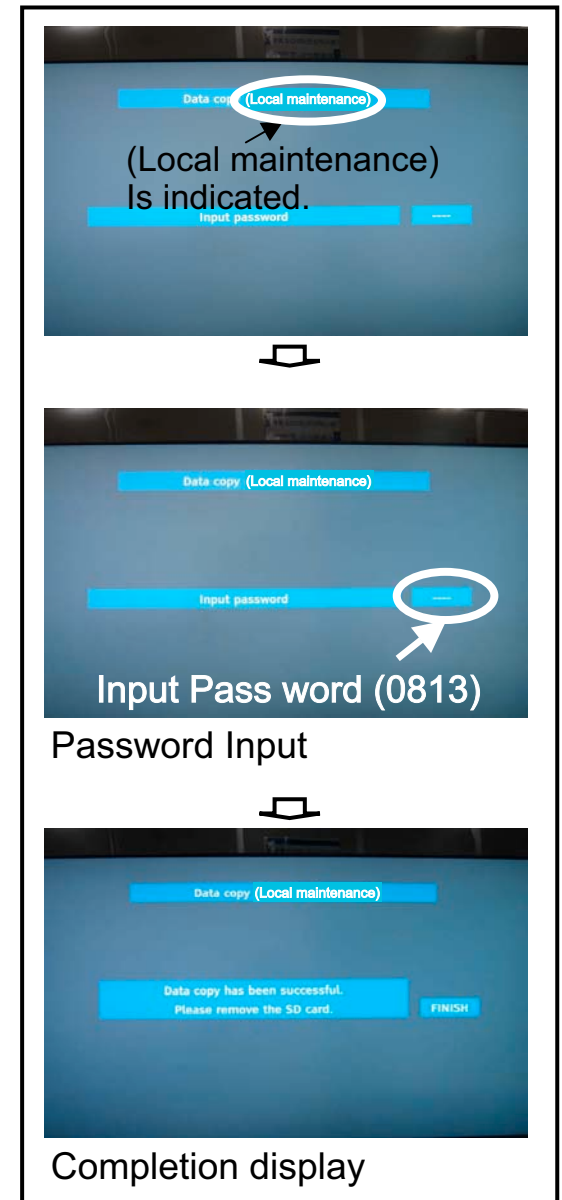
There are two purposes.

(a) Copy of setting data when exchanging repair board ( A board)

When exchanging repair board customer setting data channel scanned data, and adjustment data before exchanging board data in TV is copied to SD card, and after exchanging repair board copied data in SD card can be copied to TV.

09 model

(Before exchanging)
Setting data to SD Card

A → SD

(After exchanging)
Copied setting data
to repaired board

(Available data for Copy)
Customer setting data
Channel scanned data
Adjustment data
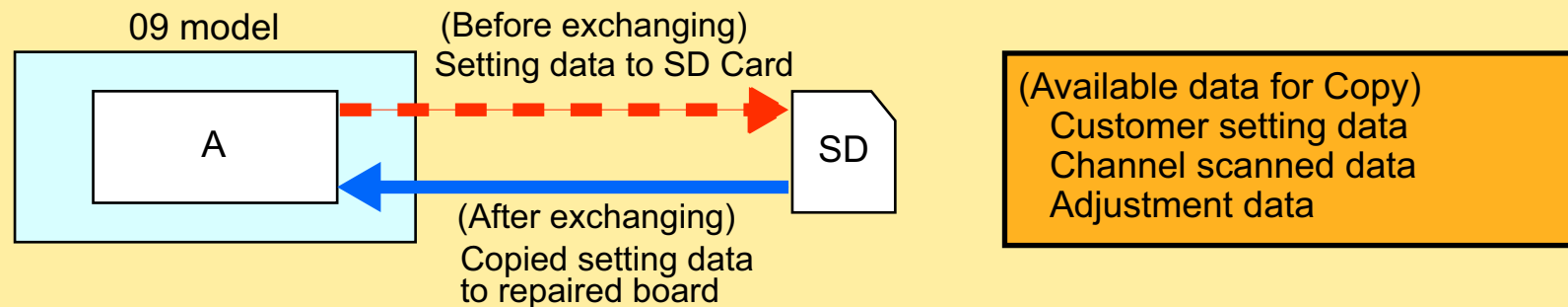
(b) Copy of hotel mode setting data

When hotel mode setting customer setting data, and channel scanned data of master set is copied to SD card, and to same models by using SD card data of master set is copied to many same models.

09 model          Same model      Same model          Same model

Master set        Data Copy       Data Copy    ■■■■  Data Copy

Copy setting data
to SD card → SD

Setting by using data of SD card

(Available data for Copy)
Customer setting data
Channel scanned data

\<From TV set to SD card\>
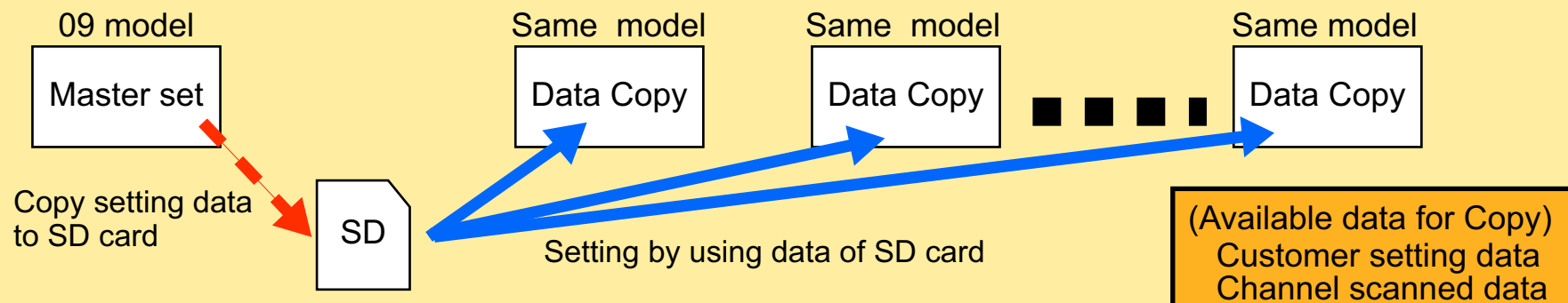
[ Preparation ]

　Make pwd file of (a) or (b) in SD card.

　(Make new (empty) text file and change file name.)

| | [ pwd File name ] |
|---|---|
| (a) For exchanging repair board | boardreplace.pwd |
| (b) For hotel mode setting | hotel.pwd |

Note : Please make only 1 file ,for preventing operation error.
　　　　When making pwd file large letters should not be used.

\<Steps of Data Copy to SD card    (TV set ➡ SD card)>

1. Power On TV set.
2. Insert SD card with pwd file to SD slot.
3. Automatically, Data Copy display will appear.
4. **Input Pass word** for Data copy to SD card by using remote control.

> [ Password for Data Copy ]
>    (a) For exchanging repair board - - - - 2770
>    (b) For hotel mode setting     - - - - 4850

5. Perform Data copy to SD card.
   Information for reference
   Time for Data copy  (TV ➡ SD card)
   Euro/Asia model - - - - 90 seconds max.

6. End of Data copy to SD card
   After the completion display of
   Data Copy appear, pull out SD card.
   Even if SD card is not pulled out, the display
   will appear automatically.
   Power Off TV set.

7. How to confirm Copy data
   File data can be confirmed by PC.
   When the following folder exists, data is pulled out.
   Folder Name : (a) For exchanging repair boards - - - - - user_setup
            (After writing data, data is deleted.)
       (b) For hotel mode setting - - - - hotel
          (After writing data, data is not deleted.)

Data copy
  (Board replacement)
      or
     (Hotel)

**Input Pass word**
  **2770**
   or
  **4850**

Performing

Completion

(e.g. exchanging repair board)
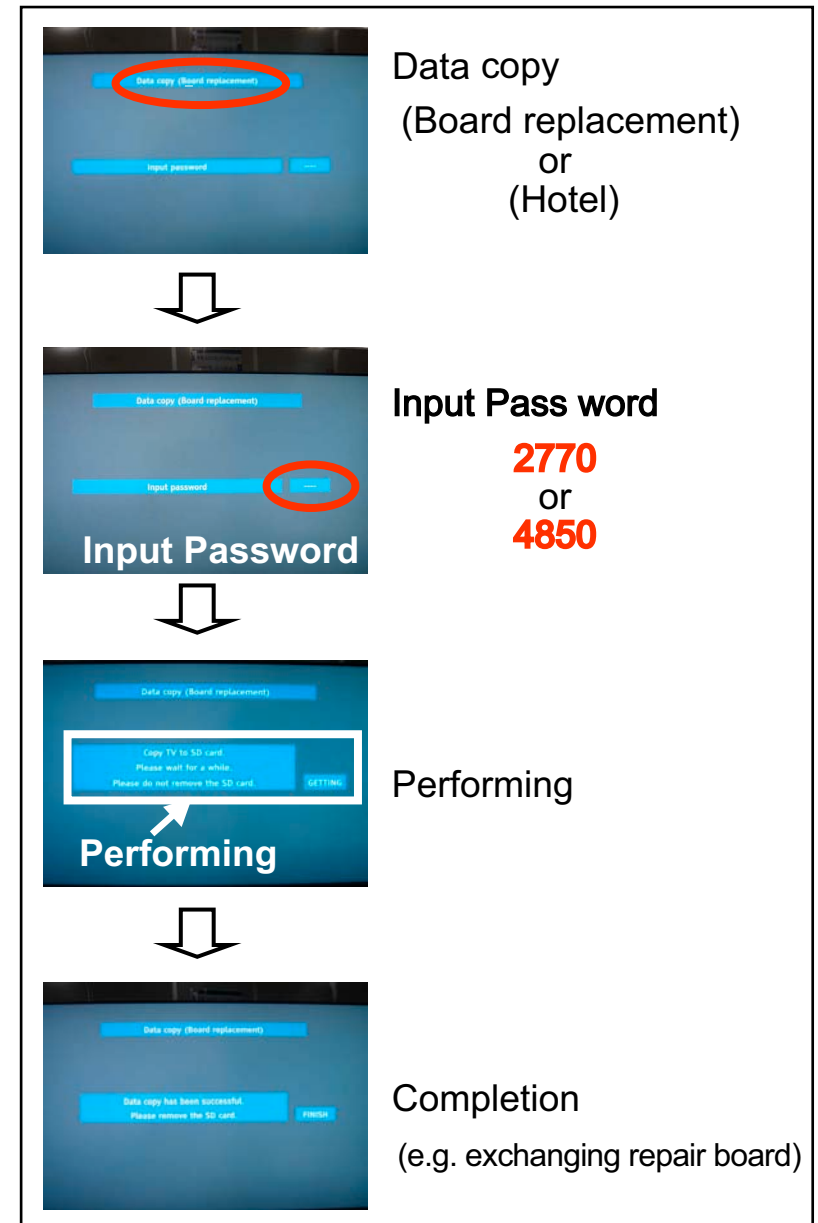
&lt;Steps of Data Copy to TV set&gt;

1. Power On TV set.

2. Insert SD card with Data to SD slot.

3. Automatically, Data Copy display will appear.

4. **Input Pass word** for Data copy to TV set by using remote control.

> [ Password for Data Copy ]
>   (a) For exchanging repair board - - - - 2771
>   (b) For hotel mode setting       - - - - 4851

5. Perform Data copy to TV set.

6. Completion of Data to TV set.
   Completion of data Copy is displayed.

7. Pull out SD card.
   Power OFF/ON by main switch.

Note: 1. Depending on the trouble of boards, function
   of Data copy for exchanging repair boards
   does not always work.
   2. This function does not work with other model numbers.

(e.g. For exchanging repair board)

Password Input(For writing)

Performing

Writing performing display

Completion
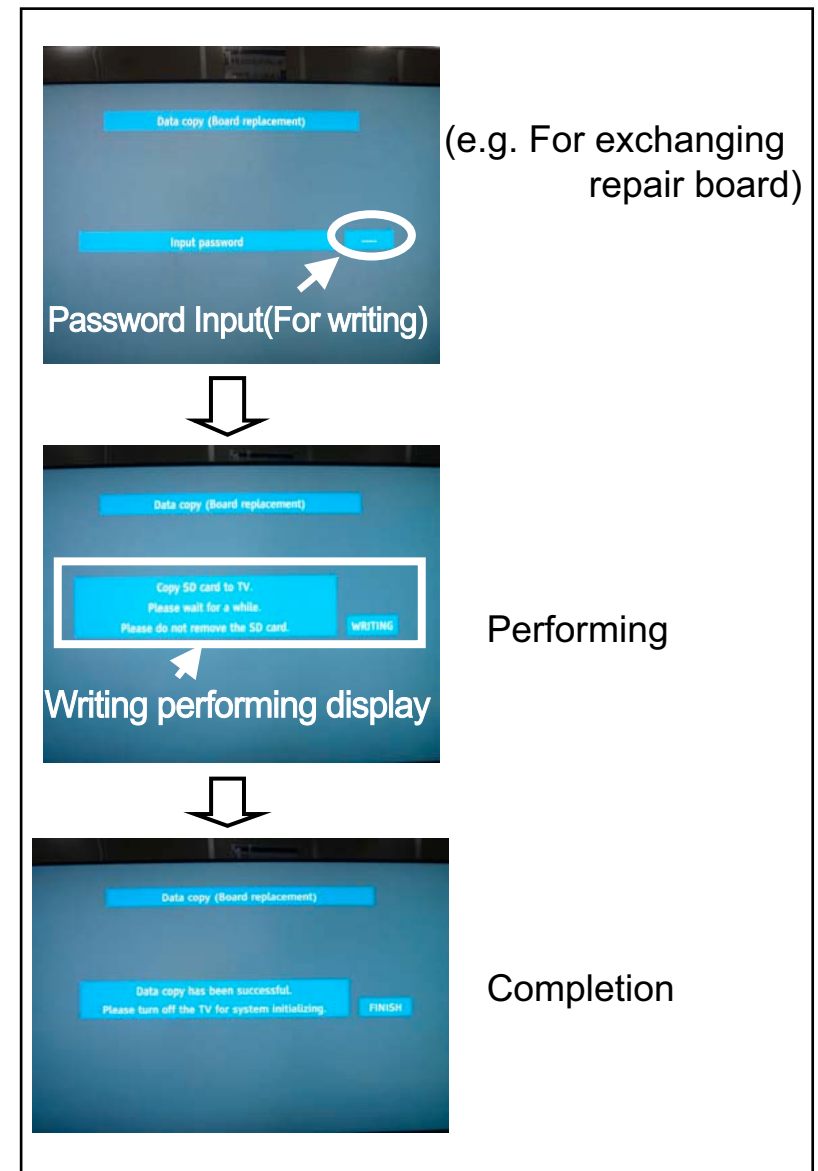
<Check of the IIC bus lines>
  1. How to access

  `Self-check indication only :`

  Produce TV reception screen, and while pressing [VOLUME ( - )] button on the main unit,
  press [OK] button on the remote control for more than 3 seconds.

  `Self-check indication and forced to factory shipment setting :`

  Produce TV reception screen, and while pressing [VOLUME ( - )] button on the main unit,
  press [MENU] button on the remote control for more than 3 seconds.

  Exit :
  Disconnect the AC cord from wall outlet or switch off the power with the [POWER] button on the main unit.

  2. Screen display & Check Point

  `(1) < V10 Series >  Screen display`      `Check Point`

```
 __FHD              Panasonic  2009PDP
 SET
                 SELF CHECK COMPLETE

 ADV       OK  PEAKS-SOFT      0.171   SUM          1f40
 ADAV      OK  PEAKS-EEP    00.30.0797
 TUN       OK  GENX-SOFT       1.01.00  Model ID      05
 GENX      OK  GENX-EEP        1.00.00        02012100
 MEM1      OK  GENX-ROMCOR     0.00.00        00000020
 MEM2      OK  PDP-MCU         01.06   EDID   ab 0515e5--
 AVSW      OK  PDP-EEP         40.06
 GC3FS     OK  PDP-FPGA        10.10
 PDP-PANEL OK  PDP-PDPOM       40.06
 OFDM      OK  FRC-EEP      00.00.0000
 TEMP      OK
 FRC       OK
 GC6       OK
 VIF       OK
```

Confirm the following parts if NG was displayed.

| Display | Ref.No. | Description | P.C.B |
|---|---|---|---|
| ADV | IC4510 | AD/HDMI | A-Board |
| ADAV | IC4510 | Sound Processor | A-Board |
| TUN | TU2901 | Tuner | A-Board |
| GENX | IC1100 | GenX (STB MCU) | A-Board |
| MEM1 | IC1101 | EEPROM (GenX) | A-Board |
| MEM2 | IC8502 | EPPROM (Peaks) | A-Board |
| AVSW | IC3001 | Audio/Video SW | A-Board |
| GC3FS | IC4001 | Global core sub | A-Board |
| PDP-PANEL | IC9003 | MICOM | D-Board |
| OFDM | IC8301 | Digital demodulater | A-Board |
| TEMP | IC1000 | Temp Sensor | A-Board |
| RFC | IC2600 | Frame rate converter | A-Board |
| GC6 | IC5100 | Global core | A-Board |
| VIF | TU2901 | Tuner | A-Board |

<Check of the IIC bus lines>
  2.Screen display & Check Point

(2) < G15 Series >  Screen display

```
__FHD              Panasonic  2009PDP
SET
                   SELF CHECK COMPLETE

ADV        OK   PEAKS-SOFT      0.171     SUM              1f40
ADAV       OK   PEAKS-EEP    00.30.0797
TUN        OK   GENX-SOFT       1.01.00   Model ID          05
GENX       OK   GENX-EEP        1.00.00               02012100
MEM1       OK   GENX-ROMCOR     0.00.00               00000020
MEM2       OK   PDP-MCU         01.06     EDID       ab 0515e5--
AVSW       OK   PDP-EEP         40.06
PDP-PANEL  OK   PDP-FPGA        10.10
OFDM       OK   PDP-PDPOM       40.06
TEMP       OK
GC6        OK
VIF        OK
LAN        OK
```

Check Point

Confirm the following parts if NG was displayed.

| Display | Ref.No. | Description | P.C.B |
|---|---|---|---|
| ADV | IC4510 | AD/HDMI | A-Board |
| ADAV | IC4510 | Sound Processor | A-Board |
| TUN | TU2901 | Tuner | A-Board |
| GENX | IC1100 | GenX (STB MCU) | A-Board |
| MEM1 | IC1101 | EEPROM (GenX) | A-Board |
| MEM2 | IC8502 | EPPROM (Peaks) | A-Board |
| AVSW | IC3001 | Audio/Video SW | A-Board |
| PDP-PANEL | IC9003 | MICOM | D-Board |
| OFDM | IC8301 | Digital demodulater | A-Board |
| TEMP | IC1000 | Temp Sensor | A-Board |
| GC6 | IC5100 | Global core | A-Board |
| VIF | TU2901 | Tuner | A-Board |
| LAN | IC8503 | Ethernet control | A-Board |

(3) < G10/S10/X10/X14 Series >  Screen display

```
__HD               Panasonic  2009PDP
SET
                   SELF CHECK COMPLETE

ADV        OK   PEAKS-SOFT      0.171     SUM              1f40
ADAV       OK   PEAKS-EEP    00.30.0797
TUN        OK   GENX-SOFT       1.01.00   Model ID          05
GENX       OK   GENX-EEP        1.00.00               02012100
MEM1       OK   GENX-ROMCOR     0.00.00               00000020
MEM2       OK   PDP-MCU         01.06     EDID       ab 0515e5--
AVSW       OK   PDP-EEP         40.06
PDP-PANEL  OK   PDP-FPGA        10.10
OFDM       OK   PDP-PDPOM       40.06
TEMP       OK
VIF        OK
```

Check Point

Confirm the following parts if NG was displayed.

| Display | Ref.No. | Description | P.C.B |
|---|---|---|---|
| ADV | IC4510 | AD/HDMI | A-Board |
| ADAV | IC4510 | Sound Processor | A-Board |
| TUN | TU2901 | Tuner | A-Board |
| GENX | IC1100 | GenX (STB MCU) | A-Board |
| MEM1 | IC1101 | EEPROM (GenX) | A-Board |
| MEM2 | IC8502 | EPPROM (Peaks) | A-Board |
| AVSW | IC3001 | Audio/Video SW | A-Board |
| PDP-PANEL | IC9003 | MICOM | A-Board |
| OFDM | IC8301 | Digital demodulater | A-Board |
| TEMP | IC1000 | Temp Sensor | A-Board |
| VIF | TU2901 | Tuner | A-Board |

<Contents>

By using this function, even in the case of blackout, the results of Self Check can be confirmed.

<Available models>

2009 PDP models

<Steps>

1. Power on of TV set and insert the SD card. (Starting file is not necessary.)
2. After inserting SD card,perform Self Check according the method of Service Manual. (refer to page 37)
3. After the completion of Self Check,log file of results is automatically made.

    File name is selfcheck.log.
    If selfcheck.log is already in SD card, results are overwritten.

Note: For PAL models, when self check is performed with inserting SD card
    and results of Self check are OK, "SELF CHECK FAILED" is displayed.

| 42HD SET | Panasonic 2009PDP | |
|---|---|---|
| **SELF CHECK FAILED** | | |
| ADV   OK | PEAKS-SOFT  0.171 | SUM  1f40 |
| ADAV  OK | PEAKS-EEP  00.30.0797 | |
| TUN   OK | GENX-SOFT  1.01.00 | Model ID  05 |
| GENX  OK | GENX-EEP  1.00.00 | 02012100 |
| MEM1  OK | GENX-ROMCOR  0.00.00 | 00000020 |
| MEM2  OK | PDP-MCU  01.06 | EDID  e2 2b1b0bfb |
| AVSW  OK | PDP-EEP  40.06 | |
| PDP-PANEL  OK | PDP-FPGA  10.10 | |
| OFDM  OK | PDP-PD2-M  40.06 | |
| TEMP  OK | | |
| FRC  OK | | |
| VIF  OK | | |
| **SD CARD INSERTED!!** | | |

When SD card is inserted and self check is OK,"SELF CHECK FAILED" is displayed.

Warning Comment "SD CARD INSERTED!!" is displayed.

(When SD card is inserted.)

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<How to read Self check. Log file>

" File contents "

[yy/mm/dd hh:mm:ss] 01 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

No.1-19

yy: year( Two last digits ),
mm: month,
dd: day,
hh: hour,
mm: minute,
ss: second

Self check result
 00 or 01 : OK
 FF : NG or Not available for Self check

Items of Self check:Refer to the table below

[ PAL  models ]

| No. | Self check items | No. | Self check items |
|-----|------------------|-----|------------------|
| 1 | exec flag (Self check 01) | 11 | mem2 (EEPROM for Peaks) |
| 2 | ZWEI | 12 | pdppnl (PDP Panel module) |
| 3 | GC3FS | 13 | OFDM |
| 4 | adv (ADV7495A) | 14 | Temperature Sensor |
| 5 | vsw (Video SW) | 15 | FRC |
| 6 | adav(ADAV4622) | 16 | GC6P |
| 7 | avsw (AV SW) | 17 | VIF |
| 8 | Tun (Main Tuner) | 18 | lan |
| 9 | genx (Genx) | 19 | usb |
| 10 | mem1 (EEPROM for Genx) | — | — |

## &lt;For PDP series in 2009&gt;

The following parameter is fundamental data.
Therefore, it will change according to the following factors and please adjust precise value with your environment and equipment .
1. Air-conditioner   2. Personal skill   3. Specification of Tools   etc.

Tools for experiment
  Company : Hakko Co.,Ltd.
  Model no. : Hakko852 / Hakko853

| Applicable model | *PDP series in 2009 year ;<br>The following ICs are used as common parts on several boards (PCBs) in models for all of the world. And the following parameter does not change depending on module (PCB).<br>Therefore, please check IC size and circuit No. of replacing IC and use an appropriate parameter as below. |
|---|---|

| Type of Definition | | | | | HD | HD | FHD | FHD | FHD/HD | FHD | FHD/HD | FHD/HD | FHD/HD | FHD | FHD | FHD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Circuit No. | | | | | IC9900 | IC9901 | IC9300 | IC9902&3 | IC8001 | IC8001 | IC8002&3 | IC8002&3 | IC4510 | IC5100 | IC5001&2 | IC2600 |
| IC size | | | | | 27*27 | 12*12 | 35*35 | 12*8 | 27*27 | 31*31 | 12*10 | 12*8 | 19*19 | 31*31 | 12*8 | 23*23 |
| Profile No. | | | | | Profile4 | Profile3 | Profile1 | Profile3 | Profile4 | Profile4 | Profile3 | Profile3 | Profile2 | Profile5 | Profile3 | Profile4 |
| Kind of work | Item 1 | Item 2 | Item 3 | unit | | | | | | | | | | | | |
| Various set up | Initial set up | Nozzle Part No. | | | A1129B | A1126B | A1203B | A1126B | A1129B | A1129B | A1126B | A1126B | A1127B | A1265B | A1126B | A1129B |
| | | Nozzle Size | | | 31*31 | 15*15 | 35*35 | 15*15 | 31*31 | 31*31 | 15*15 | 15*15 | 19*19 | 32*32 | 15*15 | 31*31 |
| | | Height from nozzle to C.B.A. | Pre-heating | mm | 40 | 30 | 40 | 30 | 40 | 40 | 30 | 30 | 30 | 40 | 30 | 40 |
| | | | Main heating | mm | 4 | 3 | 4 | 3 | 4 | 4 | 3 | 3 | 3 | 4 | 3 | 4 |
| | | | Cool down | mm | 40 | 3 | 40 | 3 | 40 | 40 | 3 | 3 | 3 | 40 | 3 | 40 |
| | Rough adjustment | Temperature | Upper side | deg | 420 | 420 | 445 | 420 | 420 | 420 | 420 | 420 | 415 | 440 | 420 | 420 |
| | | | Downer side | deg | 235 | 235 | 235 | 235 | 235 | 235 | 235 | 235 | 230 | 235 | 235 | 235 |
| | | Blow level | | l/min | 20 | 12 | 22 | 12 | 20 | 20 | 12 | 12 | 12 | 20 | 12 | 20 |
| | | Heat time | | s | 240 | 210 | 240 | 210 | 240 | 240 | 210 | 210 | 180 | 240 | 210 | 240 |
| | Fine adjustment | Temperature | Upper side | deg | 370+5 | 360+5 | 370+5 | 360+5 | 370+5 | 370+5 | 360+5 | 360+5 | 375+5 | 370+5 | 360+5 | 370+5 |
| | | | Downer side | deg | 265+5 | 265+5 | 265+5 | 265+5 | 265+5 | 265+5 | 265+5 | 265+5 | 265+5 | 265+5 | 265+5 | 265+5 |
| Repair work | Time control | Heat time | Pre-heating | s | 180 | 155 | 180 | 155 | 180 | 180 | 155 | 155 | 140 | 180 | 155 | 180 |
| | | | Main heating | s | 60 | 55 | 60 | 55 | 60 | 60 | 55 | 55 | 40 | 60 | 55 | 60 |
| | | Cool down time | | s | over 30 | over 30 | over 30 | over 30 | over 30 | over 30 | over 30 | over 30 | over 30 | over 30 | over 30 | over 30 |
| Remark for each IC | | | | | Profile4 | Profile3 | Profile1 | Profile3 | Profile4 | Profile4 | Profile3 | Profile3 | Profile2 | Profile5 | Profile3 | Profile4 |
| Additional Information | 1. If there are some parts (Crystal, capacitor, Tuner) near the target IC, cover them with heat-resistant tape. | | | | | | | | | | | | | | | |